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Ossi Kalevo

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EXAMINER

SELBY, GEVILL V

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/692,305

Applicant(s)

KALEVO, OSSI

Examiner

Gevell Selby

Art Unit

2622

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5 and 8-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 8-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/4/08 have been fully considered but they are not persuasive. The applicant submits the prior art does not disclose the following limitations of the claimed invention:

generating a real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal by the camera sensor using combining weighted pixels values according to a predetermined algorithm, and generating a real-time vertically and horizontally downsampled video signal using vertical downscaling of the real-time horizontally downsampled video signal by a processing block, as stated in claims 1, 10, and 14;

generating a real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal by the camera sensor using combining weighted pixels values in the same row according to a predetermined algorithm without using a line memory, as stated in claim 21 and 24. The Examiner respectfully disagrees.

Re claims 1, 10, and 14) In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "providing a separate horizontal downscaling of the video signal without being vertically downsampled at the same time") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Findlater reference discloses a downscaling unit 14 that performs both horizontal and vertical downscaling simultaneously as shown in figure 4 and explained in paragraphs 31-32 and 43-38, as stated by the applicant in the first paragraph on page 11 of the reply. Paragraphs 32-39 of the Findlater reference disclose the downscaling unit 14 downscales the image as shown with the 3 x 3 matrix example and can weight the pixels for combining by using different numbers of capacitors and figure 3 discloses the image signals are transferred to the downscaling unit without using a memory, so the downscaling is in real time. This reads on generating a real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal by the camera sensor using combining weighted pixels values according to a predetermined algorithm, since the horizontal downscaling is taking place and the claim does not state the only horizontal downscaling can be occurring at the time. The Findlater reference discloses a second downscaling unit 10 that further downscales the previously downsampled image when the resolution of the image needs to be reduced (see para 13). It is implied this downscaling unit also performs a vertical and horizontal downscaling of the image, but since the claim does not state that only vertical downscaling can be occurring at the time, this reads on the claim. Therefore, the Findlater reference discloses all the limitations of the claimed invention.

Re claims 2, 5, 8, 13, 14, 17, and 20) In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347,

21 USPQ2d 1941 (Fed. Cir. 1992). The remarks in the reply simply state the combinations lacks motivation or justification without explaining why this is believed to be true. Please provide evidence for the statements. In the case of claims 2, 13, and 20, it is well known to one of ordinary skill in the art that the use of a CCP bus allows quick and easy transfer of the image data. In the case of claim 5, it is well known to one of ordinary skill in the art that the use of a real-time viewfinder allows the user the quickly and easily view the image to be captured for proper framing. In the case of claims 8 and 14, it is well known to one of ordinary skill in the art to have a camera incorporated in a cell phone in order to easily output the image data to other devices in remote locations. In the case of claim 14, it is also well known to one of ordinary skill in the art to downscale video signals with weighted pixel values in order to quickly produce a real-time preview image to allow image verification while using less processing power and memory. In the case of claim 17, it is also well known to one of ordinary skill in the art wherein the processing block is a base band engine of the camera-phone mobile device, in order for the camera phone to quickly process the image data to display the real-time view.

Re claims 21 and 24) Findlater reference discloses averaging the four corners of a 3x3 matrix to downscaling the matrix to one pixel, by horizontally downscaling the pixels in the same rows and vertically downscaling the pixels in the same columns (see figure 5 and para 32-39). Since the claims do not state that only horizontal downscaling of pixels in the same row is preformed, the reference reads on generating a real-time horizontally downscaled video signal using horizontal downscaling of the real-time video signal by the camera sensor using combining weighted pixels values in the same row according to a predetermined algorithm without using a line memory.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 9-12, 21-26, 28, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Findlater et al., US 2003/0223649.**

In regard to claims 1 and 10, Findlater et al., US 2003/0223649, discloses an image generating and processing block and method of operating the device, comprising:

a camera sensor (see figure 2, element 2), responsive to a video image, configured to generate a real-time video signal of the video image by a camera sensor of the image generating and processing block (see figure 3 and para 29), a processing block (see figure 2, elements 7 and 14), responsive to the real-time horizontally downsampled video signal, configured to generate a real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal by the camera sensor using combining weighted pixels values according to a predetermined algorithm without using a line memory (see para 32-39: the downscaling unit 14 downscales the image as shown with the 3 x 3 matrix example and can weight the pixels for combining by using different numbers of

capacitors and figure 3: the image signals are transferred to the downscaling unit without using a memory), and

generating a real-time vertically and horizontally downsampled video signal using vertical downscaling of the real-time horizontally downsampled video signal by a processing block (see para 13 and 28: the digital downscaling block 10 further downscales the image when necessary).

In regard to claim 9, Findlater et al., US 2003/0223649, discloses the method of claim 1, further comprising: encoding the real-time vertically and horizontally downsampled video signal by a video packing block (see figure 2, element 12) of the image generating and processing block (see figure 2, element 7) for generating an encoded video signal(see 2 element 13 and para 14 and 15).

In regard to claim 11, Findlater et al., US 2003/0223649, discloses the image generating and processing block of claim 10, wherein the camera sensor has a camera memory (see figure 3, element 23 and para 29).

In regard to claim 12, Findlater et al., US 2003/0223649, discloses the image generating and processing block of claim 10, wherein it is inherent the processing block 9 of the Findlater reference has a processing memory, in order to store data while image processing functions are preformed (see para 12).

In regard to claims 21 and 24, Findlater et al., US 2003/0223649, discloses an electronic device and the method for operating the device, comprising:

a camera sensor (see figure 2, element), configured to generate a real-time video signal of the video image (see figure 3 and para 29) and further configured

to generate a real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal by the camera sensor using combining weighted pixels values in the same row according to a predetermined algorithm without using a line memory (see para 32-39: the downscaling unit 14 downscales the image as shown with the 3 x 3 matrix example by horizontally downscaling the pixels in the same rows and vertical downscaling the pixels in the same columns and can weight the pixels for combining by using different numbers of capacitors and figure 3: the image signals are transferred to the downscaling unit without using a memory).

In regard to claims 22 and 25, Findlater et al., US 2003/0223649, discloses the electronic device and method of claims 21 and 24, wherein said camera sensor is still further configured to generate a real-time vertically and horizontally downsampled video signal using vertical downscaling of the real-time horizontally downsampled video signal (see para 13 and 28: the digital downscaling block 10 further vertically and horizontally downscales the image that was previously horizontally and vertically downsampled by the downscaling unit 14 (see para 32-39), when necessary).

In regard to claims 23, 26, 28, and 29, Findlater et al., US 2003/0223649, discloses the electronic device and method of claims 22, 24, 1, and 10, respectively, wherein pixel color components of a downsampled image comprised in said real-time horizontally downsampled video signal have substantially equal phases (see figure 4 and para 31).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Findlater et al., US 2003/0223649, in view of Haavisto, US 2002/0071037.**

In regard to claims 2 and 13, Findlater et al., US 2003/0223649, discloses the method and image generating and processing block of claims 1 and 10. The Findlater reference discloses further comprising: an internal bus or data line, responsive to the real-time horizontally downsampled video signal from the camera sensor, for providing the real-time horizontally downsampled video signal to the processing block (see figure 1).

The Findlater references do not disclose the internal bus is a camera compact port (CCP) bus.

Haavisto, US 2002/0071037, discloses a camera with a camera compact port bus to transfer image and statistical data together to the processor (see figure 3, element 310 and para. 17).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Findlater et al., US 2003/0223649, in view of Haavisto, US 2002/0071037, to have a camera compact port (CCP) bus, in order to quickly and easy transfer the image data.

- 6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Findlater et al., US 2003/0223649, in view of Lin, US 6,778,216.**

In regard to claim 5, Findlater et al., US 2003/0223649, discloses the method of claim 1, further comprising the step of: providing the real-time vertically and horizontally downsampled video signal indicative of the video image through an internal bus (see figure 2 and column 14 and 15: the downsampled image or video sequence is provided to the I/O 14; however, the reference does not disclose it is provided to a real-time viewfinder display and displaying said video image on the real-time viewfinder display.

Lin, US 6,778,216, discloses a method for down sampling images comprising the step of: providing the real-time vertically and horizontally downsampled video signal indicative of the video image through an internal bus to a real-time viewfinder display and displaying said video image on the real-time viewfinder display (see column 3, lines 45-64 and figure 1).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Findlater et al., US 2003/0223649, in view of Lin, US 6,778,216, to have a real time viewfinder to provide the real-time vertically and horizontally downsampled video signal indicative of the video image through an internal bus to a real-time viewfinder display and display said video image on the real-time viewfinder display, in order to allow the user the quickly and easily view the image to be captured for proper framing.

- 7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Findlater et al., US 2003/0223649, in view of Yi, US 7,003,040.**

In regard to claim 8, Findlater et al., US 2003/0223649, discloses the method of claim 1, further comprising: encoding the real-time vertically and horizontally downsampled video signal by a video packing block (see figure 2, element 12) of the image generating and processing block (see figure 2, element 7), thus generating an encoded video signal, and providing said encoded video signal through a further internal bus to a file/stream block (see 2 element 13 and para 14 and 15).

The Findlater reference does not disclose wherein the image generating and processing block is a part of a camera-phone mobile device.

Yi, US 7,003,040, discloses a camera-phone mobile device (see figure 2) with a processor (see figure 3, element 20) that displays images in real-time (see column 4, lines 40-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Findlater et al., US 2003/0223649, in view of Yi, US 7,003,040, to have the processor and method of the Lin reference applied to a camera phone, in order to easily output the image data to other devices in remote locations.

8. Claims 14-16, 18, 19, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin, US 6,778,216, in view of Yi, US 7,003,040 and Findlater et al., US 2003/0223649.

In regard to claim 14, Lin, US 6,778,216, discloses a camera comprising:

an image generating and processing block (see figure 1, element 5) for generating a real-time vertically and horizontally downsampled video signal of a

video image, and for encoding said real-time vertically and horizontally downsampled video signal thus generating an encoded video signal (see column 4, lines 1-10, column 4, lines 20-29, and column 6, lines 25-34); and

a real-time viewfinder display (see figure 1, element 11), responsive to the real-time vertically and horizontally downsampled video signal, for providing a display of the video image indicative by said real-time vertically and horizontally downsampled video signal (see column 4, lines 1-19).

The Lin reference does not disclose that the camera is part of a camera-phone mobile device.

Yi, US 7,003,040, discloses a camera-phone mobile device (see figure 2) with a processor (see figure 3, element 20) that displays images in real-time (see column 4, lines 40-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Lin, US 6,778,216, in view of Yi, US 7,003,040, to have the processor and method of the Lin reference applied to a camera phone, in order to easily output the image data to other devices in remote locations.

The Lin and Yi references do not disclose wherein the real-time vertically and horizontally downsampled video signal is horizontally downsampled first to provide a real-time horizontally downsampled video signal using combining weighted pixels values according to a predetermined algorithm without using a line memory.

Findlater et al., US 2003/0223649, discloses an electronic camera with a sensor array and control circuit (see figure 2) wherein a horizontally downsampled video signal is

generated to provide a real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal using combining weighed pixels values according to a predetermined algorithm without using a line memory (see para 32-39: the downscaling unit 14 downscales the image as shown with the 3 x 3 matrix example and can weight the pixels for combining by using different numbers of capacitors and figure 3: the image signals are transferred to the downscaling unit without using a memory).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Lin, US 6,778,2168, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, wherein the real-time vertically and horizontally downsampled video signal is horizontally downsampled first to provide a real-time horizontally downsampled video signal using combining weighted pixels values according to a predetermined algorithm without using a line memory, in order to quickly produce a real-time preview image to allow image verification while using less processing power and memory.

In regard to claim 15, Lin, US 6,778,2168, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, discloses the camera-phone mobile device of claim 14. The Yi reference discloses further comprising: a file/stream block (see figure 3, antenna), responsive to the encoded signal, for providing a call connection to other mobile devices (see column 5, lines 35-41); and a phone memory (see figure 3, element 22), responsive to the encoded signal, for providing the encoded signal (see Lin: column 4, lines 8-10).

In regard to claim 16, Lin, US 6,778,2168, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, discloses the camera-phone mobile device of claim 14. The Lin reference discloses wherein the image generating and processing block, comprising:

a camera sensor (see figure 1, element 2), responsive to a video image, for generating a real-time video signal of the video image and for further generating a real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal by the camera sensor (see column 3, lines 31-41); and
a processing block (see figure 3), responsive to the real-time vertically downsampled video signal (see column 4, lines 20-29), for generating a real-time vertically and horizontally downsampled video signal using horizontal downscaling of the real-time vertically downsampled video signal (see column 6, lines 25-34).

In regard to claim 18, Lin, US 6,778,2168, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, discloses the camera-phone mobile device of claim 16. The Lin reference discloses wherein the camera sensor has a camera memory (see figure 1, element 7 and column 3, lines 45-67).

In regard to claim 19, Lin, US 6,778,2168, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, discloses the camera-phone mobile device of claim 16. The Lin reference discloses wherein the processing block has a processing memory (see figure 1, element 7 and column 3, lines 45-67).

In regard to claim 27, Lin, US 6,778,2168, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, discloses the camera-phone mobile device of claim

14. The Findlater reference discloses wherein the image generating and processing block comprises: a camera sensor (see figure 2, element 2, responsive to the video image, configured to generate the real-time video signal of the video image and further configured to generate said real-time horizontally downsampled video signal using horizontal downscaling of the real-time video signal and is still further configured to generate a real-time vertically and horizontally downsampled video signal using vertical downscaling of the real-time horizontally downsampled video signal (see para 29 and 32-39: the downscaling unit 14 downscales the image as shown with the 3 x 3 matrix example).

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin, US 6,778,216, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, as applied to claim 16 above, and further in view of Atsum, US 2005/0036046.

In regard to claim 17, Lin, US 6,778,216, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, discloses the method of claim 16, respectively. The Lin, Yi, and Findlater references do not disclose wherein the processing block is a base band engine of the camera-phone mobile device.

Atsum, US 2005/0036046, discloses a camera phone system wherein the base-band engine (see figure 1, element 53) may be used for image processing (see para 30).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Lin, US 6,778,216, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, and further in view of Atsum, US 2005/0036046, wherein the processing block is a base band engine of the camera-phone

mobile device, in order for the camera phone to quickly process the image data to display the real-time view.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin, US 6,778,216, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, as applied to claim 16 above, and further in view of Haavisto, US 2002/0071037.

In regard to claim 20, Lin, US 6,778,216, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, discloses the camera-phone mobile device of claim 16, further comprising:

an internal bus, responsive to the real-time horizontally downsampled video signal from the camera sensor, for providing the real-time horizontally downsampled video signal to the processing block (see figure 1).

The Lin, Yi, and Findlater references do not disclose the internal bus is a camera compact port (CCP) bus.

Haavisto, US 2002/0071037, discloses a camera with a camera compact port bus to transfer image and statistical data together to the processor (see figure 3, element 310 and para. 17).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Lin, US 6,778,216, in view of Yi, US 7,003,040, and Findlater et al., US 2003/0223649, and further in view of Haavisto, US 2002/0071037, to have a camera compact port (CCP) bus, in order to quickly and easy transfer the image data.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs

/Lin Ye/
Supervisory Patent Examiner, Art Unit 2622